Applicant: Lars Abrahmsén et al. Attorney's Docket No.: 13425-053001 / 00395-US

Serial No.: 10/081,408

Filed: February 21, 2002

Page : 2 of 10

## Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application.

## **Listing of Claims**:

- 1. (Previously Presented) A nucleic acid comprising a nucleotide sequence encoding a secreted fusion protein consisting of:
  - (i) a signal peptide that directs secretion of the fusion protein from a host cell;
- (ii) a soluble form of human semicarbazide-sensitive amine oxidase (SSAO) consisting of amino acids 29 to 763 of SEQ ID NO:2 or a fragment thereof exhibiting benzylamine oxidase activity;
  - (iii) a first fusion partner that enables dimerization of the soluble form of human SSAO;
- (iv) a protease cleavage site located between the soluble form of human SSAO and the fusion partner; and
  - (v) optionally one or more spacer amino acid sequences.
  - 2-3. (Cancelled)
- 4. (Previously Presented) The nucleic acid according to claim 1, wherein the soluble form of human SSAO consists of amino acids 29 to 763 of SEQ ID NO:2.
  - 5-6. (Cancelled)
- 7. (Original) The nucleic acid according to claim 1, wherein the fusion partner is fused to the N-terminal portion of the soluble form of human SSAO.
  - 8. (Cancelled)

Applicant: Lars Abrahmsén et al. Attorney's Docket No.: 13425-053001 / 00395-US

Serial No.: 10/081,408

Filed: February 21, 2002

Page : 3 of 10

9. (Currently Amended) The nucleic acid according to claim 1/2 8, wherein the fusion partner is a variant of *Schistosoma japonicum* glutathione S-transferase, the variant having at least one of the cysteine residues in positions 85, 138, and 178 replaced by another amino acid residue.

- 10. (Currently Amended) The nucleic acid according to claim 1 8, wherein the fusion partner comprises the amino acid sequence of SEQ ID NO:4 or SEQ ID NO:5.
- 11. (Original) The nucleic acid according to claim 1, wherein the signal peptide is a mouse IgG1 heavy chain signal peptide.
- 12. (Original) The nucleic acid according to claim 1, wherein the protease cleavage site is a 3C protease cleavage site.
- 13. (Previously Presented) The nucleic acid according to claim 12, wherein the 3C protease cleavage site comprises the amino acid sequence EALFQG (SEQ ID NO:6).
- 14. (Original) The nucleic acid according to claim 1, wherein the fusion protein comprises the amino acid sequence of SEQ ID NO:20.
  - 15. (Original) An expression vector comprising the nucleic acid of claim 1.
  - 16. (Original) An expression vector comprising the nucleic acid of claim 14.
- 17. (Original) A method for the purification of a recombinant human SSAO, the method comprising:
  - (i) transfecting a cell with the expression vector according to claim 15;
- (ii) culturing the cell in a culture medium and under conditions wherein the fusion protein encoded by the expression vector is secreted into the culture medium;
  - (iii) binding the secreted fusion protein to a ligand having affinity for the fusion partner;

Applicant: Lars Abrahmsén et al. Attorney's Docket No.: 13425-053001 / 00395-US

Serial No.: 10/081,408

Filed: February 21, 2002

Page : 4 of 10

(iv) separating the fusion partner and the soluble form of human SSAO; and

- (v) recovering the soluble form of human SSAO.
- 18. (Previously Presented) The method according to claim 17, wherein the ligand having affinity for the fusion partner is glutathione.
- 19. (Original) The method according to claim 17, wherein the fusion partner is separated from the soluble form of human SSAO by protease cleavage.
- 20. (Original) The method according to claim 19, wherein the protease is a picornavirus 3C-protease.
- 21. (Original) The method according to claim 20, wherein the protease is rhinovirus 3C-protease.
- 22. (Previously Presented) The method according to claim 19, wherein the protease is fused to a second fusion partner resulting in a fusion protease.
- 23. (Original) The method according to claim 22, wherein the fusion protease is separated from the soluble form of human SSAO by a process comprising binding the fusion protease to a ligand having affinity for the fusion protease.
- 24. (Previously Presented) A method for the preparation of an immobilized recombinant human SSAO, the method comprising:
  - (i) transfecting a cell with the expression vector according to claim 15;
- (ii) culturing the cell in a culture medium and under conditions wherein the fusion protein encoded by the expression vector is secreted into the culture medium; and
- (iii) binding the secreted fusion protein to a ligand having affinity for the first fusion partner to thereby immobilize the fusion protein.

Applicant: Lars Abrahmsén et al.
Serial No.: 10/081,408
Filed: February 21, 2002
Page: 5 of 10

25-26. (Cancelled)

Attorney's Docket No.: 13425-053001 / 00395-US